

CLAIMS

What is claimed is:

1. In an infrared element positionable over a conveyor wherein said infrared element includes a source terminal and a return terminal and is configured to extend upwardly from a first lateral side of said conveyor and downwardly toward a second lateral side of said conveyor, the improvement comprising:

said source and said return terminals being positioned adjacent to each other in a manner such that, when said infrared element is positioned over said conveyor, said source and said return terminals will both be located on said first lateral side of said conveyor;

said infrared element including an outgoing segment comprising a source end having said source terminal thereon, an upwardly extending portion following said source end, and a downwardly extending portion following said upwardly extending portion; and

said infrared element including a return segment comprising a return end having said return terminal thereon, a downwardly extending portion preceding said return end, and an upwardly extending portion preceding said downwardly extending portion of said return segment.

2. The infrared element of claim 1 wherein the improvement further comprises said infrared element having a distal turn-around portion such that said outgoing segment extends from said

source terminal to said distal turn-around portion and said return segment extends from said distal turn-around portion to said return terminal.

3. The infrared element of claim 1 wherein the improvement further comprises said infrared element being substantially symmetrical such that said return segment is substantially a mirror image of said outgoing segment.

4. The infrared element of claim 1 wherein the improvement further comprises said outgoing and said return segments being spaced apart from and substantially parallel to each other.

5. The infrared element of claim 1 wherein the improvement further comprises at least an upper portion of each of said outgoing and said return segments being arched.

6. The infrared element of claim 1 wherein the improvement further comprises at least an upper portion of each of said outgoing and said return segments being semicircular.

7. The infrared element of claim 1 wherein the improvement further comprises each of said outgoing and said return segments having an inverted-U-shape.

8. The infrared element of claim 7 wherein the improvement further comprises said outgoing and said return segments being spaced apart from and substantially parallel to each other.

9. The infrared element of claim 7 wherein the improvement further comprises each of said outgoing and said return segments having a semicircular upper portion.

10. In an infrared oven having a conveyor therein and a plurality of infrared elements over said conveyor wherein each of said infrared elements includes a source terminal and a return terminal and is shaped such that one portion extends upwardly from a first lateral side of said conveyor and another portion extends downwardly toward a second lateral side of said conveyor, the improvement comprising both said source terminal and said return terminal of each of said infrared elements being located on said first lateral side of said conveyor.

11. The infrared oven of claim 10 wherein the improvement further comprises each of said infrared elements having:

an outgoing segment extending from said source terminal and having a first portion extending upwardly away from said first lateral side of said conveyor and a second portion extending downwardly toward said second lateral side of said conveyor and

a return segment extending to said return terminal and having a first portion extending upwardly away from said second lateral side and a second portion extending downwardly toward said first lateral side of said conveyor.

12. The infrared oven of claim 11 wherein the improvement further comprises each of said infrared elements having a distal turn-around portion such that said outgoing segment extends from said source terminal to said distal turn-around portion and said return segment extends from said distal turn-around portion to said return terminal.

13. The infrared oven of claim 12 wherein the improvement further comprises said distal turn-around portion of each of said infrared elements being located on said second lateral side of said conveyor.

14. The infrared oven of claim 11 wherein the improvement further comprises said infrared element being substantially symmetrical such that said return segment is substantially a mirror image of said outgoing segment.

15. The infrared oven of claim 11 wherein the improvement further comprises said outgoing and said return segments being spaced apart from and substantially parallel to each other.

16. The infrared oven of claim 11 wherein the improvement further comprises at least an upper portion of each of said outgoing and said return segments being arched.

17. The infrared oven of claim 11 wherein the improvement further comprises at least an upper portion of each of said outgoing and said return segments being semicircular.

18. The infrared oven of claim 11 wherein the improvement further comprises each of said outgoing and said return segments having an inverted-U-shape.

19. The infrared oven of claim 18 wherein the improvement further comprises said outgoing and said return segments being spaced apart from and substantially parallel to each other.

20. The infrared oven of claim 18 wherein the improvement further comprises each of said outgoing and said return segments having a semicircular upper portion.

21. The infrared oven of claim 11 wherein said infrared elements are upper infrared elements and the improvement further comprises a plurality of lower infrared elements positioned below said conveyor, each of said lower infrared elements having a source terminal and a return terminal and both said source terminal and said return terminal of each of said lower infrared elements being located on said first lateral side of said conveyor.

22. In a dual lane infrared oven including a first conveyor and a second conveyor, each of said conveyors having an outer lateral side and an inner lateral side and said conveyors extending side-by-side such that said inner lateral side of said second conveyor is adjacent to said inner

lateral side of said first conveyor, and said dual lane infrared oven further including a plurality of first conveyor infrared elements over said first conveyor and a plurality of second conveyor infrared elements over said second conveyor, each of said first and said second conveyor infrared elements having a source terminal and a return terminal, each of said first conveyor infrared elements being shaped such that one portion extends upwardly from said outer lateral side of said first conveyor and such that another portion extends downwardly toward said inner lateral side of said first conveyor and each of said second conveyor infrared elements being shaped such that one portion extends upwardly from said outer lateral side of said second conveyor and such that another portion extends downwardly toward said inner lateral side of said second conveyor, the improvement comprising:

both said source terminal and said return terminal of each of said first conveyor infrared elements being located on said outer lateral side of said first conveyor and

both said source terminal and said return terminal of each of said second conveyor infrared elements being located on said outer lateral side of said second conveyor.

23. The dual lane infrared oven of claim 22 wherein the improvement further comprises:

each of said first conveyor infrared elements having

an outgoing segment extending from said source terminal and having a first portion extending upwardly away from said outer lateral side of said first conveyor and a second portion extending downwardly toward said inner lateral side of said first conveyor and

a return segment extending to said return terminal and having a first portion extending upwardly away from said inner lateral side of said first conveyor and a second portion extending downwardly toward said outer lateral side of said first conveyor and

each of said second conveyor infrared elements having

an outgoing segment extending from said source terminal and having a first portion extending upwardly away from said outer lateral side of said second conveyor and a second portion extending downwardly toward said inner lateral side of said second conveyor and

a return segment extending to said return terminal and having a first portion extending upwardly away from said inner lateral side of said second conveyor and a second portion extending downwardly toward said outer lateral side of said second conveyor.

24. The dual lane infrared oven of claim 23 wherein the improvement further comprises each of said first and said second conveyor infrared elements having a distal turn-around portion such that said outgoing segment extends from said source terminal to said distal turn-around portion and said return segment extends from said distal turn-around portion to said return terminal.

25. The dual lane infrared oven of claim 24 wherein the improvement further comprises said distal turn-around portion of each of said first conveyor infrared elements being located on said

inner lateral side of said first conveyor and said distal turn-around portion of each of said second conveyor infrared elements being located on said inner lateral side of said second conveyor.

26. The dual lane infrared oven of claim 23 wherein the improvement further comprises each of said first and said second conveyor infrared elements being substantially symmetrical such that said return segment is substantially a mirror image of said outgoing segment.

27. The dual lane infrared oven of claim 23 wherein the improvement further comprises said outgoing and said return segments of each of said first and said second conveyor infrared elements being spaced apart from and substantially parallel to each other.

28. The dual lane infrared oven of claim 23 wherein the improvement further comprises at least an upper portion of each of said outgoing and said return segments of said first and said second conveyor infrared elements being arched.

29. The dual lane infrared oven of claim 23 wherein the improvement further comprises at least an upper portion of each of said outgoing and said return segments of said first and said second conveyor infrared elements being semicircular.

30. The dual lane infrared oven of claim 23 wherein the improvement further comprises each of said outgoing and said return segments of said first and said second conveyor infrared elements having an inverted-U-shape.

31. The dual lane infrared oven of claim 30 wherein the improvement further comprises said outgoing and said return segments of each of said first and said second conveyor infrared elements being spaced apart from and substantially parallel to each other.

32. The dual lane infrared oven of claim 30 wherein the improvement further comprises each of said outgoing and said return segments having a semicircular upper portion.

33. The dual lane infrared oven of claim 23 wherein said first and said second conveyor infrared elements are upper infrared elements and the improvement further comprises a plurality of first conveyor lower infrared elements positioned below said first conveyor and a plurality of second conveyor lower infrared elements positioned below said second conveyor, each of said first and said second conveyor lower infrared elements having a source terminal and a return terminal, both said source terminal and said return terminal of each of said first conveyor lower infrared elements being located on said outer lateral side of said first conveyor, and both said source terminal and said return terminal of each of said second conveyor lower infrared elements being located on said outer lateral side of said second conveyor.